High-definition Analog Video Camera

(Built-in OSD)

USER'S MANUAL

Applicable for: AHD Standard Cameras, AHD Dome Cameras, AHD Waterproof IR Cameras

Thank you for purchasing our products. Please read the manual carefully before operating

Safety Precaution

Warning
Don't dismantle without authority,
becareful thunder striking.
Note: To avoid thunder-strking, please don't open the backcover,
the maintenance must be made by our authorized serviceman.

This symbol means that there might exist uninsulated dangerous voltage inside the case, be careful of electric shock.

This symbol reminds you to pay attention to important operation and maintenance instructions in the accompanied information.

Warning

- In order to prevent damage caused by fire or electric shock, please do not put cameras exposed in the moist environment or rainwater.
- Please make sure the adapter is consistent with product specifications, otherwise it might cause fire, electric shock or damage.
- Pay attention to polarity of the adapter, it might cause some accidents like fires.
- Please don't connect multiple cameras with the same adapter at the same time; overloading of adapter capacity may cause fires.
- Power supply must be firmly fixed so as not to loose to cause fires.
- If the device gets " abnormal smell or smoke", please stop it immediately and contact with our customer service center.
- If the camera doesn't work as usual, please do not dismantle it by

yourself. Please contact our local distributor or our maintenance office authorized by our company, otherwise we won't promise warranty.

➢ Please do not splash water on the product components when cleaning.

Notes

➢ Do not make the products under great impact or stay away from strong electromagnetic interference and vibration.

➢ There are some sophisticated parts inside the camera, therefore, during transportation and installation, please avoid the damage cause by stress or severe vibration. For the sake of safety, please do not switch on power before accomplishing all installation.

➢ Please comply with all electrical safety standards during operation, camera or signal transmission cable should maintain a sufficient distance (50 meters) with high-voltage equipment or cables, if necessary, lighting and thunder protective measures must be taken.

➢ Please install the camera in well-ventilated environment.

➢ Please do not make the camera face sunshine or other strong light directly in case of any damage to the lens and the sensor.

➢ The temperature and humidity range for cameras work are -10 ~ 50 ℃, less than 95% separately, please do not start cameras beyond this range.

➢ To avoid lightning strikes, please make sure the installation of power supply ground line in a good condition.

➢ To prevent the equipment from damage by shower or splash of water, please do not place the device substances such as liquid.

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Ⅰ、OSD

Press the "OK" button, the camera will pop up the main menu system

MAIN MENU	
1. LENS	MANUAL
2. EXPOSURE	↵
3. BACKLIGHT	OFF
4. WHITE BAL	ATW
5. DAY & NIGHT	EXT↵
6. NR	↵
7. SPECIAL	↵
8. ADJUST	↵
9. EXIT	SAVE & END↵

1.1 LENS

There are 2 types of lenses, respectively: DC lens (DC drive lens), video camera (manual lens). Users can select the lens type according to the using of the camera. Press the "left" or "right" button on to choose the lens. When select the iris speed, should choose "DC" file; users can adjust the "speed" value to adjust the open speed of iris. The value smaller, the speed of opening the iris is lower; the value bigger, the speed is faster.

DC LENS MODE	
1. MODE	INDOOR
2. IRIS SPEED	0-15
3. RETURN	RET↵

Users can choose indoor mode & outdoor mode accordingly.

Outdoor Mode

OUTDOOR MODE	
1. MIN SHU	1/25
2. MAX SHU	1/50
3. RETURN	RET↵

1.2 EXPOSURE

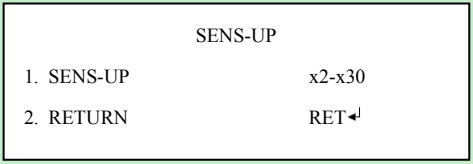
Move the cursor to "EXPOSURE"; press the "OK" button to enter the sub-menu. Press left-right key to set the relevant parameters of AGC & Brightness.

Sens-up, D-WDR, DEFOG can also be set.

EXPOSRURE	
1. SHUTTER	----
2. AGC	0-15
3. SENS-UP	OFF
4. BRIGHTNESS	0-100
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET↵

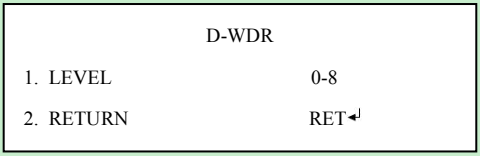
Sens-up has the two choices: "Auto", "OFF". User can select according to the lens equipped correspondingly.

Choose auto to enter sub-menu. Sens-up can be set between x2 to x30.

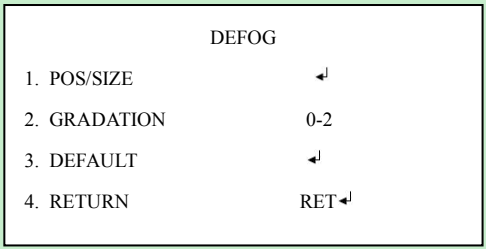


D-WDR has three options: auto, on and off.

When D-WDR on, user can choose level between 0-8.



DEFOG has two options: off and auto. Choose auto to set.



1.3 BACKLIGHT

In the "Backlight" menu, press the "left" "right" to select "BLC,

OFF, HSBLC". Users can select the appropriate backlight mode, according to the actual needs.

Under BLC Mode, BLC level can set middle, low and high.

BLC MODE	
1. LEVEL	Middle/HIGH/LOW
2. AREA	↵
3. DEFAULT	↵
4. RETURN	RET↵

HSBLC Mode, there are totally 4 select areas. Display can set on and off. Black mask can also set on and off. HSBLC level is from 0 to 100.

HSBLC	
1. SELECT	AREA 1,2,3,4
2. DISPLAY	ON/OFF
3. BLACK MASK	ON/OFF
4. LEVEL	0-100
5. MODE	ALL DAY/NIGHT
6. DEFAULT	↵
7. RETURN	RET↵

HSBLC mode has two options: night and all day. On night mode, AGC level can be adjusted from 0 to 255.

NIGHT MODE	
1. AGC LEVEL	0-255
2. RETURN	RET↵

1.4 WHITE BAL

White Balance is used to restore the authenticity of the scene; it is affected by scene color temperature change. Users can choose the corresponding white balance mode, according to the actual needs of the scene. They are: ATW/AWC->Set/Indoor/Outdoor/Manual/AWB.

In Manual WB mode, the “Blue” and “Red” color can be adjusted from 0 to 100.

MANUAL WB	
1. BLUE	0-100
2. RED	0-100
3. RETURN	RET↵

Note: In general, users only need to use the auto-tracking white balance (AWB).

1.5 DAY & NIGHT

Day/night switching function is mainly for the user to use the camera easily on different occasions. There are 4 modes of day/night: color mode, black and white mode, EXT mode, auto mode.

Press the "left" "right" key to select "Auto Mode". Click "OK" to

enter "Auto Mode" sub-menu, you can set the corresponding parameters.

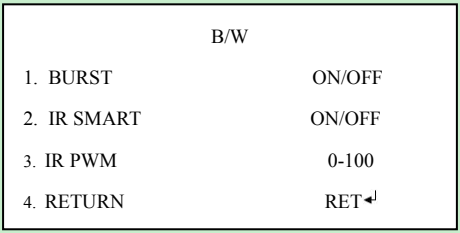
AUTO Mode

D&N AUTO	
1. D->N (AGC)	0-255
2. D->N (DELAY)	0-255
3. N->D (AGC)	0-255
4. N->D (DELAY)	0-255
5. RETURN	RET↵

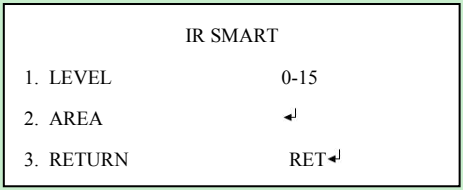
Delay, with this setting the camera achieves the delay time of the transferring: color to black/white or black/white to color. Conversion between the colors is through controlling of the camera's brightness sensor of the scene. When the light is at critical time, the camera may switch the modes back and forth between color and black/white. Setting the delay time function can resolve this problem. When the camera senses the light intensity during this period are in line with the color conversion before the conversion feature, or do not perform.

It is also intended to better protect the camera and allows users to have better image quality.

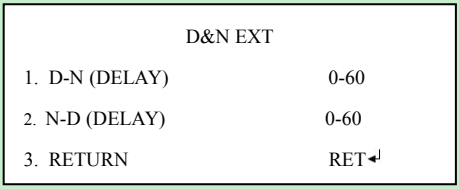
B/W Mode



When IR smart on, click “OK” button to enter the sub-menu of IR Smart.



EXT MODE



Delay for both D->N and N->D could be adjusted from 0 to 60.

Note: Set the "D-N(DELAY)" and "N-D(DELAY)" is to prevent the frequent changes in light caused by switching the camera has been

in a state of users. On the choice of the value, do not set to the same value. The same value will lead to frequent switch under the light intensity changing.

1.6 NR

In the "NR" menu click "OK" button to enter the sub-menu, you can set the corresponding parameters.

Noise reduction is in the case of very low light reduction caused by low-light point of the picture noise to enhance the signal to noise ratio (S / N) and image clarity, and the camera in low light conditions catches clearly sharpness image, the quality can be guaranteed.

NR	
1. 2DNR	LOW/MIDDLE/HIGH/OFF
2. 3DNR	LOW/MIDDLE/HIGH/OFF
3. RETURN	RET ↵

Set the noise reduction mode, 2DNR, 3DNR two options. Choose noise reduction corresponds to the modes.

When the setup complete, click "OK" button to return to the implementation for the appropriate functions.

1.7 Special

Click “OK” button to enter the “Special” setting sub-menu.

SPECIAL

1. CAM TITLE	ON↵
2. D-EFFECT	↵
3. MOTION	OFF
4. PRIVACY	OFF
5. LANGUAGE	ENG↵
6. DEFECT	↵
7. RS485	↵
8. RETURN	RET ↵

CAMERA TITLE

In the "camera title" menu, press the "left" "right" to select "On" At this point the camera image will display the name of executive function. Click "OK" button to enter the "CAMERA TITLE" setting sub-menu, you can set the camera name.

You can set the camera code as numbers, uppercase letters, and related symbols. The length of the names is 15 characters.

"Clear" is for removing the camera name.

"Location" name for the set position. Through the "up, down, left, right" mobile name location, to determine a good location, then press "OK" button to return the name of the Edit menu.

"End" is the end of the name edit to return to the previous menu.

D-EFFECT

D-EFFECT	
1. FREEZE	ON/OFF
2. MIRROR	OFF/MIRROR/V-FLIP/ROTATE
3. NEG.IMAGE	OFF/ON
4. RETURN	RET ↵

When “FREEZE” set “ON”, the “MIRROR” function is not available.

MOTION

In the " MOTION" menu, press the "left" "right" to select "On". At this point the image will open the motion detection. Then, click "OK" button to enter the " MOTION" setting sub-menu, to set the detect range and sensitivity settings.

MOTION	
1. SELECT	AREA 1/2/3/4
2. DISPLAY	ON/OFF
3. SENSTIVITY	0-100
4. COLOR	RED/GREEN/BLUE/WHITE
5. IRANS	0.25/0.5/0.75/1.00
6. ALARM	↵
7. DEFAULT	↵
8. RETURN	RET↵

ALARM can be set under motion mode, click “OK” button to enter the sub-menu.

ALARM	
1. VIEW TYPE	ALL/OFF/BLOCK/OUTLINE
2. OSD VIEW	ON/OFF
3. ALARM OUT	ON/OFF
4. ALARM SIG	HIGH/LOW
5. TIME	1-15
6. RETURN	RET↵

PRIVACY

In the "PRIVACY" menu, press the "left" "right" to select "On".

At this point the image will open the Privacy masking. Then, click "OK" to enter "privacy shield" setting sub-menu, you can mask the scope of privacy and sensitivity settings.

PRIVACY	
1. SELECT	AREA 1,2,3,4
2. DISPLAY	COLOR/OFF/MOSAIC/INV.
3. COLOR	WHITE/BLACK/RED/BLUE/YELLOW/GREEN/CYAN/USER
4. TRANS.	1.00/0.25/0.50/0.75
5. DEFAULT	↵
6. RETURN	RET↵

LANGUAGE

English, Chinese(CHN1 & CHN2), German, French, Italian, Spanish, Polish, Russian, Portuguese, Dutch, Turkish, totally twelve language selections.

DEFECT

Chooses this item, then presses the “OK” key to enter sub-menu.

DEFECT	
1. LIVE DPC	ON/OFF
2. WHITE DPC	ON/OFF
3. BLACK DPC	ON/OFF
4. RETURN	RET↵

LIVE DPC ON

LIVE DPC	
1. AGC LEVEL	0-255
2. LEVEL	0-255
3. RETURN	RET↵

WHITE DPC ON

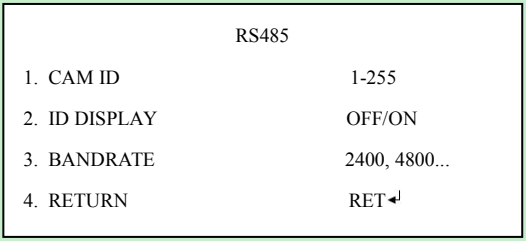
WHITE DPC	
1. POS/SIZE	↵
2. START	↵
3. DPC VIEW	OFF/ON
4. LEVEL	0-60
5. AGC	0-14
6. SENS UP	x2,4,6,8,10,15,20,25,30
7. RETURN	RET↵

BLACK DPC ON

BLACK DPC	
1. POS/SIZE	↵
2. START	↵
3. DPC VIEW	OFF/ON
4. LEVEL	0-100
5. RETURN	RET↵

RS485

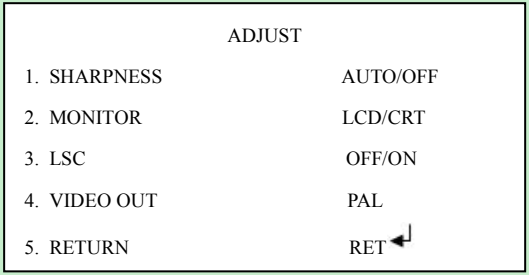
Click “OK” button to enter the sub-menu.



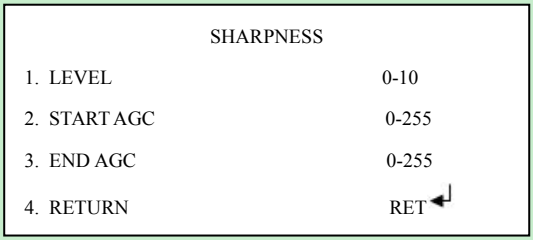
Please note the RS485 function is not available for the IR cameras.

8. ADJUST

Click “OK” button to enter the sub-menu of “ADJUST”. Picture could be adjusted according to user.

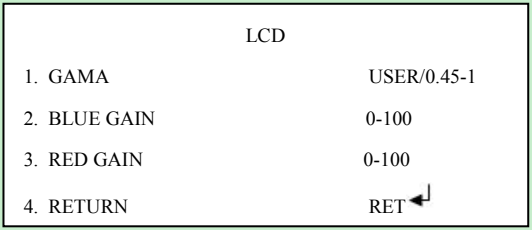


Sharpness could be adjusted when choose the “AUTO” mode.

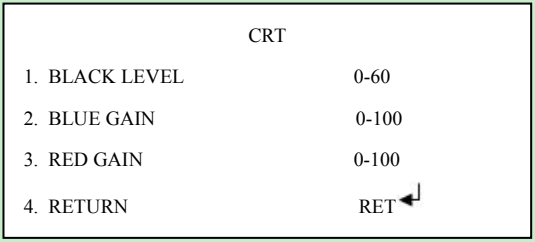


Press the "left" "right" to select the monitor type: LCD & CRT.

LCD



CRT



9. Exit

After the parameter establishment completes, when it needs to preserve, choose “SAVE & END” and click “OK” button to save the changes. Camera will return to factory set if click the “RESET” button. If don’t want to save the changes, just choose the “NOT SAVE”, and click OK to Exit OSD menu.

Ⅱ、Technical Specification

Imaging Sensor	1.3 Megapixel CMOS
Signal System	PAL
Horizontal resolution	720P
Electronic Shutter	PAL：1/50～1/100000s
S/N Ratio	More than 52dB
Video Output	1.0Vp-p, 75 ohms
Minimum Illumination	0.01 Lux/F1.2, 0 Lux with IR
Day & Night	ICR
Syn. System	Internal
BLC	BLC/OFF/HSBLC
Video Output	BNC
Power Supply	DC12V
Operation Temperature	-20^0C～$+50^0$C
Operation Humidity	10%~90%RH
Lens	3.6mm
Cable length	0.4m

III、FAQ

1. Q: No image after installation?

a. Check to connect the power supply correctly, whether the indicating led is always on or not;

b. Check the video cable, make sure it is workable;

c. Check if the monitor has been open.

2. Q: Image interference after installation

a. Check the power quality, if the adapter can't work, please replace another one.

b. Check if electromagnetic interference exists in the surroundings, please use some anti-interference devices.

3. Q: The image color is abnormal.

a. please make sure if the white balance is correctly set as Auto White Balance.

b. Please enter the menu to restore factory settings.

4. Q: Image appears to be whiter than usual after installation?

a. Please check whether the lens aperture was adjusted too large, so that the image appears whiter.

b. Please verify the camera rear panel, if the regulator potentiometer is adjusted too large.

c. Check if the brightness of the monitor is too large.

5. Q: When installation, image is not clear or exist dark corners?

a. Please adjust focus and zoom of the lens. Make sure the focus should be adjusted in a proper way.

b. Please check if the lens is clean.